Mhat is claimed:

- 1. A method of preventing or treating a disorder associated with excessive loss of calcium from bone in a human individual comprising administering to the individual a pharmaceutically acceptable gallium compound.
- 2. The method of claim 1 wherein said disorder is hypercalcemia.
- 3. The method of claim 1 wherein said disorder is osteopenia or osteoporosis.
- 4. The method of claim 1 wherein said disorder is due to bone metastasis from malignant tumors.
- 5. The method of claim 1 where n said disorder is hyperparathyroidism.
- 6. The method of Claim 1 wherein said disorder is periodontal disease and said gallium compound is administered intra-orally in a topical formulation selected from the group consisting of comprising a concentrated rinse, gel or other pharmaceutically acceptable carrier.

- 7. A method of treating or preventing disorders associated with excessive loss of calcium from bone in animals comprising the administration of a pharmaceutically acceptable gallium compound.
- 8. A method of inhibiting release of calcium from bone explants comprising contacting said explants with a gallium compound.
- 9. The method of claim 1 wherein said gallium compound is administered intravenously, subcutaneously or intramuscularly.
- 10. The method of claim 9 wherein intravenous injection comprises continuous infusion.
- 11. The method of claim 9 wherein said injection comprises amounts ranging from about 10-400 mg/sq m/day.
- 12. The method of claim 1 wherein the amount of said administered gallium salt is sufficient to maintain a steady state plasma gallium concentration ranging from about 0.1-5.0 ug/ml.

- 13. Method claim 12 wherein the amount of said administered quality salt is sufficient to maintain a steady state plasma gallium concentration ranging from about 0.9-2.0 ug/ml
- 14. The method of claim 1 wherein said gallium compound is administered orally, sub-lingually, per rectum or transdermally
- 15. The method of claim 14 wherein the amount of administered gallion compound comprises amounts from about 0.5-20 grams day.
- 16. The method of claim 1 wherein said gallium compound is gallium nitrate.
- 17. A composition for treatment of hypercalcemia associated with excessive loss of calcium from bone comprising an anti-hypercalcemic effective amount of a gallium compound in a pharmaceutically acceptable carrier.

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